

REMARKS

I. Introduction

The Office Action dated March 24, 2005, has been carefully reviewed and the foregoing amendment has been made in response thereto. Claims 18 and 19 have been added. Claims 1-19 are pending in the application. Claim 3 was found to recite patentable subject matter.

II. Rejection of Claims 1, 2, 4-6, and 11-17 under 35 USC 102(b)

Claims 1, 2, 4-6, and 11-17 stand rejected under 35 USC 102(b) as being anticipated by Wilson (US 1,627,299). Applicant respectfully traverses this rejection because Wilson does not disclose or even suggest all of the limitations recited in the claims.

Applicant's invention, as recited in claim 1, is directed to a valve assembly wherein a cavity is sunk into one face surface of first and second face surfaces and wherein an O-ring is inserted into the cavity. A retainer is secured into the cavity internally of the O-ring, the retainer having a sloped peripheral edge squeezing the O-ring against the peripheral bearing surface. The O-ring is deformed to substantially fill the cavity between the peripheral bearing surface and the sloped peripheral edge. Moreover, a portion of the O-ring extends out of the cavity above the one face surface for forming a seal between the first and second face surfaces. By deforming to substantially fill the cavity, high pressure fluid cannot enter the cavity behind the O-ring as it could in the prior art. The present invention thereby allows the use of commonly available, low cost O-rings in face sealing applications while avoiding the prior art tendency for the O-ring to dislodge.

Wilson fails to disclose an O-ring squeezed by a sloped peripheral edge of a retainer against a peripheral bearing surface of the cavity so that the O-ring is deformed to substantially fill the cavity between the edge and the bearing surface. Instead, Wilson forms its sealing ring of successive, flatwise superposed, strongly compacted, united layers X of a material into a ring of stiff and of but slightly elastic

character. It is preferably composed of asbestos rings and is only very slightly compressible. As a consequence, it substantially retains its form under pressure (column 2, lines 96-104). Therefore, the shape of sealing ring S shown in Wilson is determined by the beveling off of edges of the laminae (see column 3, lines 10-20) rather than any deformation caused by squeezing between a cavity and a retainer.

MPEP §706.02 states that an invention is anticipated by a prior art reference under 35 USC §102(b) only if the prior art reference teaches every aspect of the claimed invention. Furthermore, in Paperless Accounting, Inc. v. Bay Area Rapid Transit Sys., 804 F.2d 659, 665 (Fed. Cir 1986), the Federal Circuit stated that “[A] §102(b) reference must sufficiently describe the claimed invention to have placed the public in possession of it.” In addition, Judge Learned Hand noted that for prior art to be anticipatory, the prior art must “bear within its four corners adequate directions for the practice of the patent invented. If the [prior art] offers no more than a starting point for further experiments...it is not an anticipation,” Dewey & Almy Chem. v. Mimex, 124 F.2d 986, 990 (2d Cir. 1942).

In light of these requirements for a rejection based on anticipation, Wilson fails to provide a proper basis for rejecting claim 1. Independent claims 14 and 15 likewise recite that the O-ring is deformed to substantially fill the cavity. Therefore, all of claims 1, 2, 4-6, and 11-17 are allowable over Wilson.

III. Rejection of Claims 7-10 under 35 USC 103(a)

Claims 7-10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Wilson (U.S. Patent No. 1,627,299). Applicant respectfully traverses this rejection in light of the following arguments.

As set forth in MPEP §2143, three basic criteria must be met to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim

limitations. The teaching must be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Even under the obviousness standard, Wilson fails to provide a proper basis for rejecting any of the present claims. Since Wilson teaches a substantially incompressible ring of only slight elasticity, it is not deformed as recited by the present claims. The specific features recited in claims 7-10 are in the context of a structure that retains and deforms an O-ring. Nothing in Wilson or within the obvious design choices of one skilled in the art following the teachings of Wilson is suggestive of the recited structures. Therefore, claims 7-10 are allowable over Wilson.

IV. Amendment of Claim 2

Claim 2 has been amended to more particularly point out and distinctly claim the subject matter of the invention. Since the function of the unsloped edge portion is to avoid potential damage from the O-ring contacting any sharp edges (page 5, lines 17-19 of the specification), the specific location of the unsloped portion at the face surface where the deformed O-ring projects outward is significant. The analysis in the rejection correlated the unsloped portion with a section of Wilson's clamping plate 22 which is adjacent recess 18. The unsloped portion as recited in amended claim 2 is not adjacent to the cavity but to the O-ring at the face surface.

V. New Claims

Claims 18 and 19, dependent on claims 15 and 14, respectively, have been added to include limitations similar to claim 3 (which was indicated as having allowable subject matter). Thus, claims 18 and 19 are likewise allowable.

VI. Conclusion

In view of the foregoing amendment and remarks, claims 1-19 are now in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Mark L. Mollon", written over a horizontal line.

Mark L. Mollon

Attorney for Applicant(s)

Reg. No. 31,123

Dated: June 2, 2005
MacMillan, Sobanski & Todd, LLC
One Maritime Plaza, Fourth Floor
720 Water Street
Toledo, Ohio 43604
(734) 542-0900
(734) 542-9569 (fax)